Abstract

The present invention relates to a sensor element which has a semiconductor structure based on a Group III-nitride. The semiconductor sensor element serves for determining the pressure, the temperature, a force, a deflection or an acceleration. It has a substrate base 1, disposed thereon, a homogeneous semiconductor layer based on a Group III-nitride, the surface of the homogeneous semiconductor layer 2 orientated towards the substrate base 1 having at least partially a spacing from the surface of the substrate base orientated towards the homogeneous semiconductor layer 2, 2f, and being distinguished in that at least two electrical conducting contacts 5 for conducting an electrical output signal, which can be generated by the homogeneous semiconductor layer 2, 2f, are disposed on, at or under the homogeneous semiconductor layer 2, 2f or are integrated in the latter.